

REMARKS

The foregoing amendments and the following remarks are responsive to the Office Action mailed October 27, 2003. Applicant respectfully requests reconsideration of the present application.

Claims 1-26 are pending. No claims have been amended, added, or cancelled.

Examiner rejected claims 1-4, 8-15, 19-20, 23-26 under 35 U.S.C. §102(a) as being unpatentable over U.S. Patent No. 4,954,819 issued to Watkins. Watkins discusses a computer windowing system for display of multiple dynamic images. Watkins' system uses image frame buffers A and B (block 22) shown in Figures 1, 2, 4, and 5). Watkins does not use three swappable windows. Rather, two windows, A and B, are swapped, as can be seen in Figure 5. Figure 4 of Watkins illustrates the two image buffers A and B, as well as data buffers. However, while the image buffers A and B are swapped, data buffers 1, 2, and 3 are not. Rather, Watkins describes data buffers 1, 2, and 3 as being used for determining which data in the image buffers is valid. (See, Watkins, column 4, lines 23-29).

In contrast, claim 1 of the present invention recites:

An improved method for providing a processor access to image data, said processor having a memory space of a given size, the method comprising:

- receiving an image for processing;
- creating first, second, and third swappable windows for accessing image data from said image, said windows being swappable so that any two are available within the memory space of the processor while a third is being loaded in a background memory;
- after initializing two of the windows with image data from said image and affixing those windows in the memory space of the processor as left and right adjacent windows, providing access to image data by performing substeps of:
 - i. loading the window that is not affixed in the memory space of the processor with image data from said image, said window temporarily comprising a shadow window that is loaded in the background memory,
 - ii. swapping said windows such that the left window is removed from the memory space of the processor, the right window now becomes the left window in the memory space of the processor, the shadow window now becomes the right window in the memory space of the processor, and the left window removed from the memory space of the processor now

- becomes a temporary shadow window to be loaded in the background memory, and
- iii. providing access to the then-current left and right windows in the memory space of the processor for supporting image processing of said image.

(Claim 1). Watkins does not teach or suggest three swappable windows. Rather, Watkins discusses two image buffers, A and B, which are swappable. Therefore, claim 1, which recites three swappable windows, is not anticipated by or obvious over Watkins. Claims 2-18 which depend on claim 1 and incorporate its limitations, are not anticipated by Watkins for at least the same reasons advanced above with respect to claim 1.

Claim 19 recites:

An apparatus for facilitating digital image processing, the apparatus comprising:
multiple two-dimensional image storage elements, including active and background ones;
a first control mechanism to temporarily map some of the two-dimensional image storage elements into an address space of a processor, whereupon those two-dimensional image storage elements become active in the address space of the processor;
a mechanism to background load one of the two-dimensional image storage elements that is not currently active in the address space of the processor; and
a second control mechanism to swap in the two-dimensional image storage element that has been background loaded into the address space of the processor, whereupon that two-dimensional image storage element becomes active in the address space of the processor.

(Claim 19). Watkins does not teach or suggest “temporarily map[ping] some of the two dimensional storage elements into an address space of a processor.” In fact, Watkins does not discuss the address space of a processor at all. Therefore, Watkins does not anticipate or make obvious claim 19. Claims 20-26 depend on claim 19, and incorporate its limitations. Therefore, for at least the same reasons advanced above with respect to claim 19, claims 20-26 are not anticipated by or obvious over Watkins.

Examiner rejected claims 5-7, 17-18 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,954,819 issued to Watkins and alleged knowledge in the art. The Applicants respectfully submit that Watkins does not teach or suggest three windows, as

noted above with respect to claim 1. The alleged knowledge in the art, pointed to by the Examiner, also does not teach or suggest this element. Therefore, these claims are not obvious over Watkins in view of the alleged knowledge in the art.

Examiner rejected claim 16 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,954,819 issued to Watkins in view of U.S. Patent No. 6,631,316 issued to Stam, et al. Stam discusses an image processing system to control vehicle headlamps or other vehicle equipment. Firstly, Applicants respectfully submit that Stam and Watkins are different art areas, and that one of skill in the art in image display would not look to vehicle equipment art, such as Stam. Therefore, the combination of Watkins and Stam is not logical. Furthermore, even in combination Watkins and Stam do not make the claims obvious. Stam does not teach or suggest having three windows for swapping. As discussed above, Watkins does not teach or suggest this either. Therefore, even in combination, claim 16, which depends on claim 1 and incorporates its limitations, is not obvious over Watkins in view of Stam.

Examiner rejected claims 21 and 22 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,954,819 issued to Watkins in view of U.S. Patent No. 6,463,481 issued to Lupien, et al. Lupien discusses a direct memory access control system for a digital scanner. The system of Lupien is for storing data in memory, not for displaying data. Therefore, Lupien is non-analogous art to the present invention. Furthermore, even in combination, Watkins and Lupien fail to make the present invention obvious. Lupien does not teach or suggest "temporarily map[ping] some of the two dimensional storage elements into an address space of a processor." As discussed above, Watkins does not teach or suggest this either. Therefore, even in combination, claims 21 and 22, which depend on claim 10 and incorporate its limitations, is not obvious over Watkins in view of Lupien.

In view of the foregoing amendments and remarks, Applicant respectfully submits that all pending claims are in condition for allowance. Such allowance is respectfully requested.

If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to contact Judith A. Szepesi at (408) 720-8300.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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